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## **Abstract**

[0018] A multi-channel-bandwidth frequency-hopping system is described in which low bandwidth and high bandwidth hops are possible. There are more center frequencies available for low bandwidth hops than the high bandwidth hops. There are multiple possible center frequencies for low bandwidth hops within the same bandwidth range used for a single high bandwidth hop. By using more center frequencies for the low bandwidth hops than the high bandwidth hops, an improved system capacity, improved interference immunity, and backwards capacity with prior systems is provided.